

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (cancelled).

2. (currently amended): A semiconductor laser device comprising:

a plurality of semiconductor laser diodes connected in series to one another;

a plurality of bypass diodes each connected in parallel to at least one semiconductor laser diode, wherein each bypass diode has a higher rising voltage than a rising voltage of said at least one semiconductor laser diode to which it is connected in parallel; and

~~The semiconductor laser device according to claim 1, further comprising a plurality of heat sinks, respectively fixed to said semiconductor laser diodes and each having a refrigerant inside, wherein one of said plurality of heat sinks is fixed to each of said plurality of~~
semiconductor laser diodes;

wherein a first end of each bypass diode has a polarity equal to a polarity of a first end of said at least one semiconductor laser diode to which it is connected, and a second end of each bypass diode has a polarity equal to a polarity of a second end of said at least one semiconductor laser diode to which it is connected.

3. (original): The semiconductor laser device according to claim 2, further comprising a manifold which supplies said refrigerant to each of said heat sinks.

4. (cancelled).

5. (currently amended): A semiconductor laser device comprising:
a plurality of semiconductor laser diodes connected in series to one another;
a plurality of bypass diodes each connected in parallel to at least one semiconductor laser diode, wherein each bypass diode has a higher rising voltage than a rising voltage of said at least one semiconductor laser diode to which it is connected in parallel; and
a first cooling member which is connected to said bypass diodes to cool said bypass
diodes;

wherein a first end of each bypass diode has a polarity equal to a polarity of a first end of said at least one semiconductor laser diode to which it is connected, and a second end of each bypass diode has a polarity equal to a polarity of a second end of said at least one semiconductor laser diode to which it is connected; and

~~The semiconductor laser device according to claim 4,~~ wherein said first cooling member comprises a cold plate having a refrigerant inside.

6. (currently amended): The semiconductor laser device according to claim 2, wherein each of said bypass diode is connected in parallel to one semiconductor diode and is fixed to that

of said heat sinks which is fixed to the associated semiconductor laser diode connected in parallel to that bypass diode.

7. (currently amended): The semiconductor laser device according to claim 26,
further comprising an n-type electrode provided on an n side of each of said bypass diodes and a p-type electrode provided on a p side of each of said bypass diodes;

wherein each of said bypass diodes is fixed to the associated heat sink ~~in such a way that~~
a p side of said bypass diode contacts said heat sink;

~~an n-type electrode is provided on an n side of said bypass diode, and~~
said n-type electrode is connected to a p-type electrode of another bypass diode.

8. (currently amended): The semiconductor laser device according to claim 2, ~~wherein~~
further comprising:

a first insulating member connected to each of said heat sinks;

~~an n-type electrode is provided at each of said heat sinks via a~~ connected to each first
insulating member,

~~each of said heat sinks has a p-type electrode~~ member connected to each first insulating
member ~~in such a way that~~ said p-type electrode member penetrates said first insulating member
and said n-type electrode, and

a second insulating member ~~is provided~~ between said p-type electrode member and said
n-type electrode.

9. (currently amended): The semiconductor laser device according to claim 8, wherein said bypass diode is provided in place of said first insulating member, ~~said p-type electrode member is provided in such a way as to penetrate said bypass diode and said n-type electrode, and~~ said second insulating member is provided between said p-type electrode member and said n-type electrode and between said p-type electrode member and said bypass diode.

10. (currently amended): The semiconductor laser device according to claim 8, ~~wherein~~ further comprising an extension member is provided at disposed on said n-type electrode ~~in such a way that a top of said extension member is positioned at a same height as a height from said heat sink to a top of said p-type electrode member.~~

11. (original): The semiconductor laser device according to claim 3, wherein said bypass diodes are fixed to said manifold.

12. (cancelled).

13. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 2.

14. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 3.

15. (cancelled).

16. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 5.

17. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 6.

18. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 7.

19. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 8.

20. (original): A semiconductor-laser excited solid-state laser apparatus having a semiconductor laser device as recited in claim 9.